

Water Mist Systems as part of a fire strategy

Paul Bryant

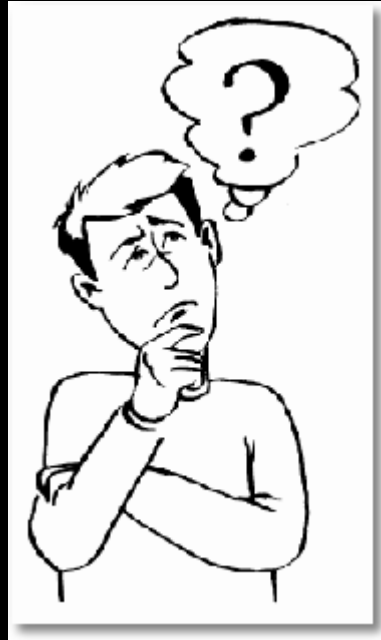
The London Underground experience



We do have a choice



Each system has its merits
So how do we choose?



It's all about determining the objectives for fire safety...

It's all about strategic thinking.

PUBLICLY AVAILABLE SPECIFICATION

PAS 911:2007

Fire strategies

– guidance and framework for their formulation



BSi
British Standards

ICS code: 13.220.01

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*The fire strategy applies to
all buildings
– it determines the
requirements for systems
amongst much else.*

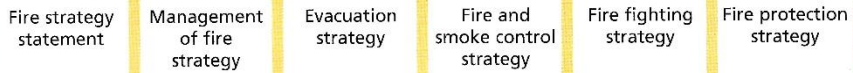
*Do not think of **water mist** as an alternative to other forms of fire suppression ...*

Think of it as part of the armoury of wider fire safety measures for any and every fire strategy.

The design basis



The fire strategy



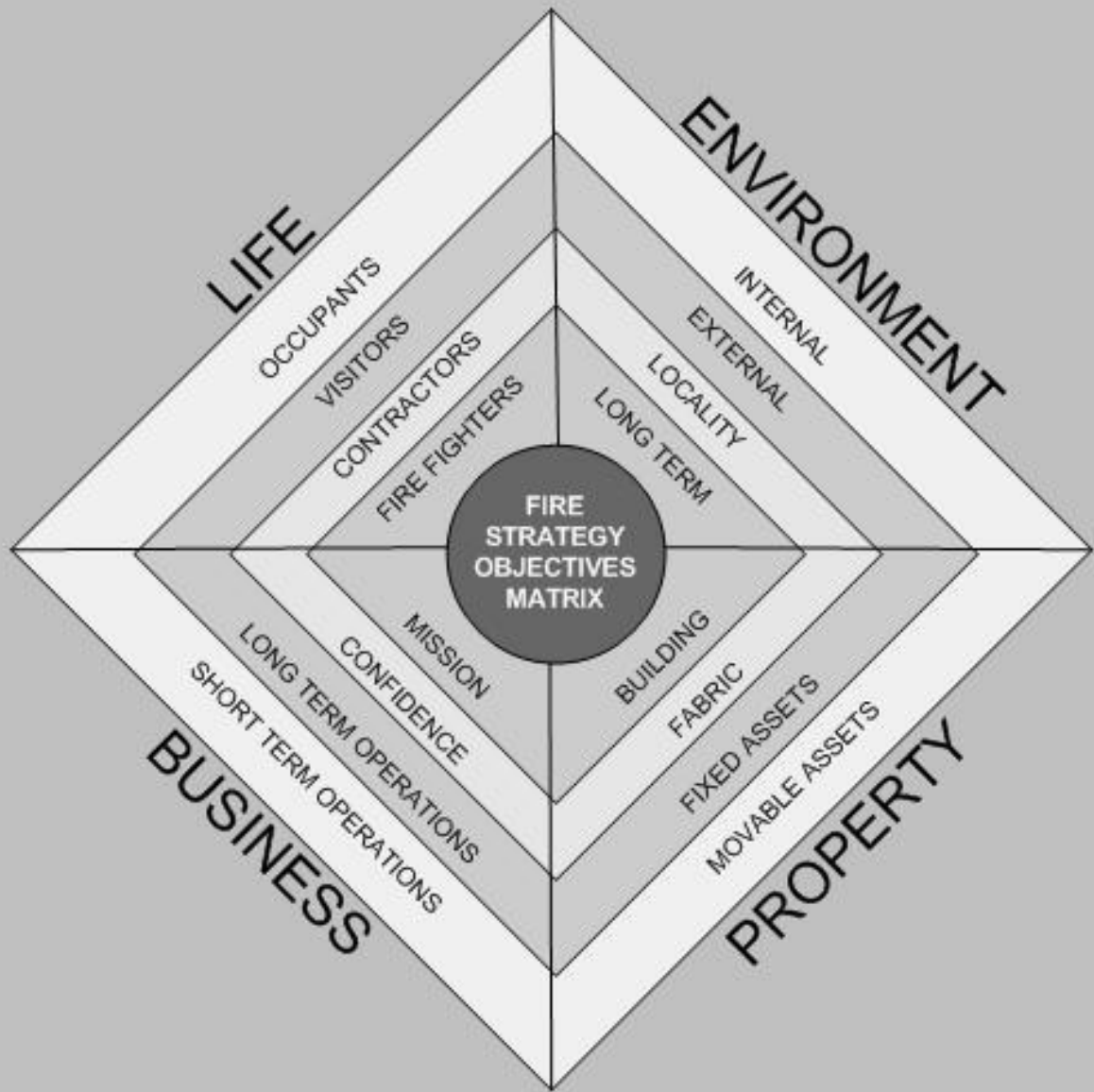
Specification, arrangement and design of:

- Building layout and construction
- Internal sub-divisions and compartments
- Internal linings, fixtures and fittings
- Fire exit routes and designation of places of safety and relative safety
- Vertical escape arrangements
- Smoke reservoir and containment systems
- Fire/smoke doors and shutters
- Fire/smoke dampers
- Smoke control, pressurization and ventilation systems
- Fire detection systems
- Fire warning and alerting systems
- Fire suppression systems
- Fire inerting systems
- First aid fire fighting systems
- Fire service intervention facilities
- Emergency lighting systems
- Fire signage

Policies and procedures for:

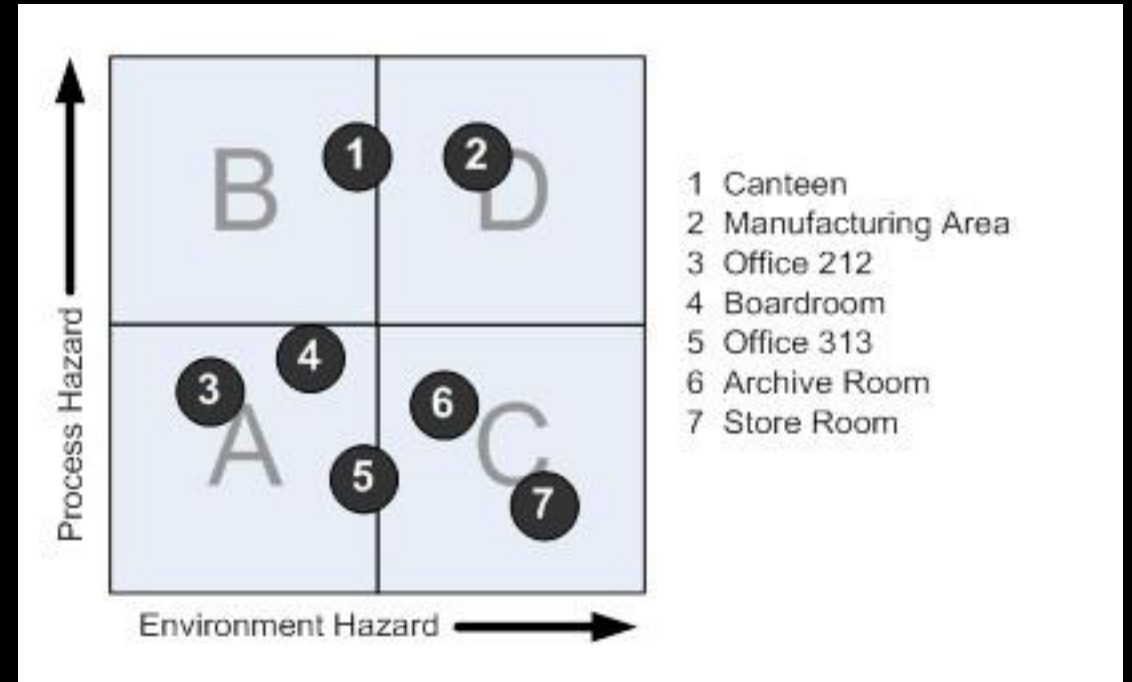
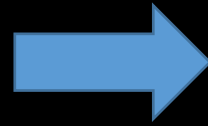
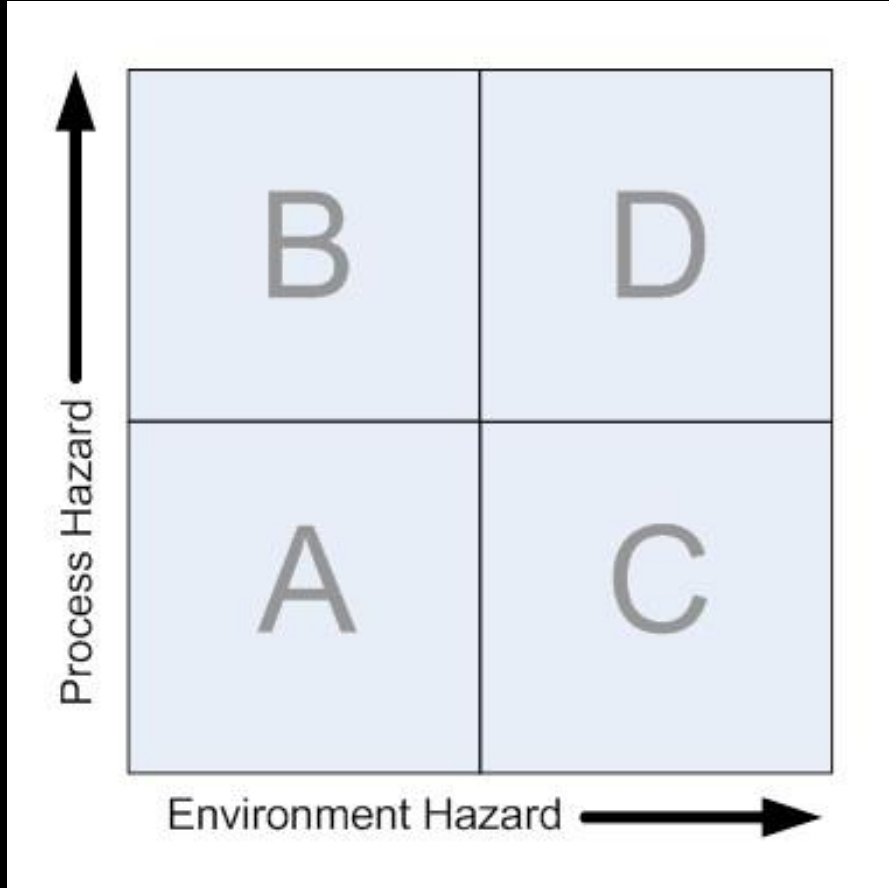
- Managing fire safety
- Responsibilities and authorities
- Liaising with external parties
- Maintaining compliance
- Fire risk assessments
- Maintenance of fire systems
- Audits of active and passive fire systems
- Controlling works (e.g. hot works)
- Smoking
- Procuring materials
- Linings, fixtures and fittings
- Training
- Fire drills
- Monitoring of fire system performance

NOTE The above lists are not exhaustive and each item may not be relevant to every specific case.



How can water mist assist with **any** and **every** of these objectives?

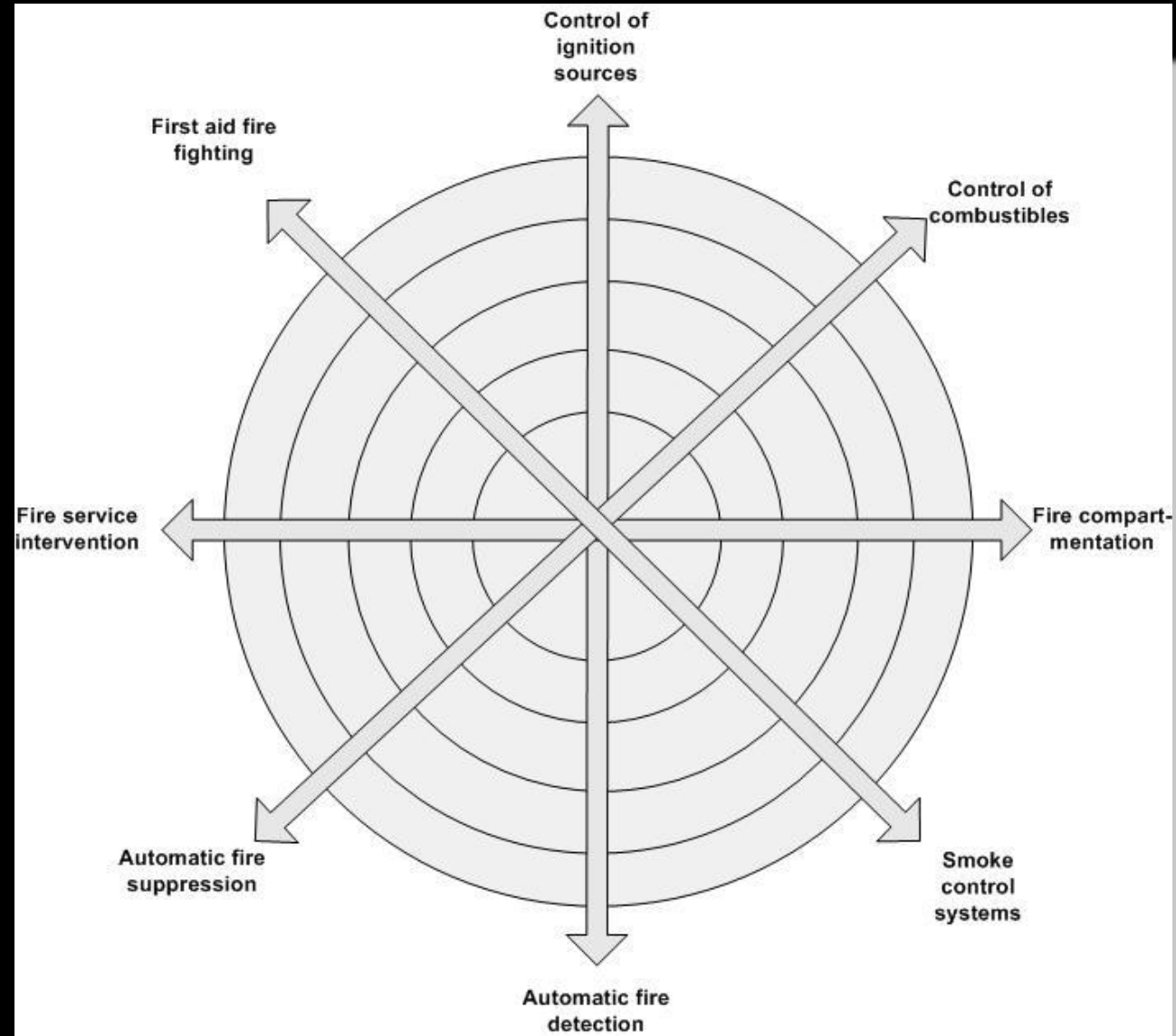
Identification of fire risk

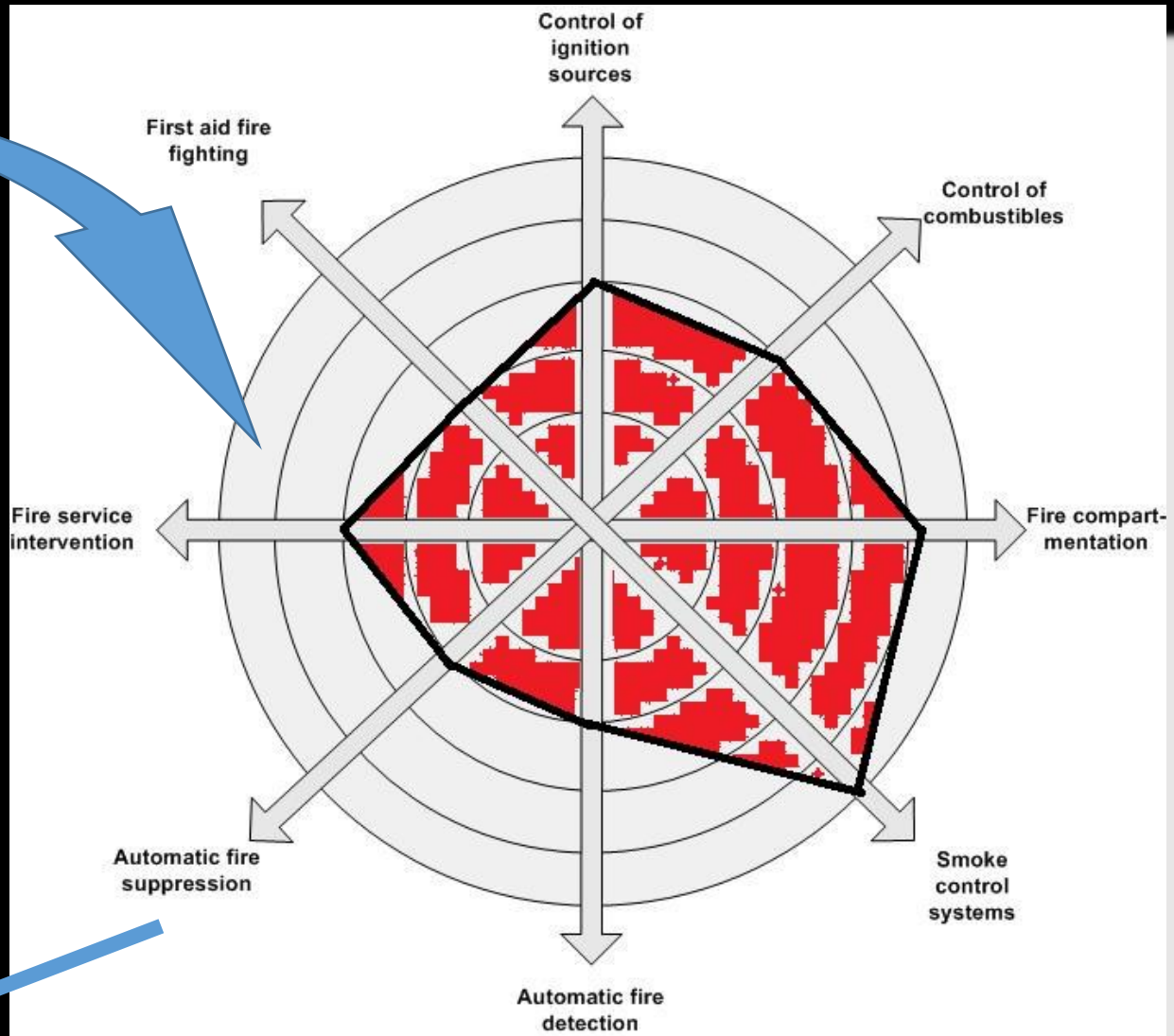


How can water mist assist with these risks?

We need to “picture” what the needs for a fire strategy are.

The fire strategy spider diagram ...





How can water mist assist with other strategic elements?

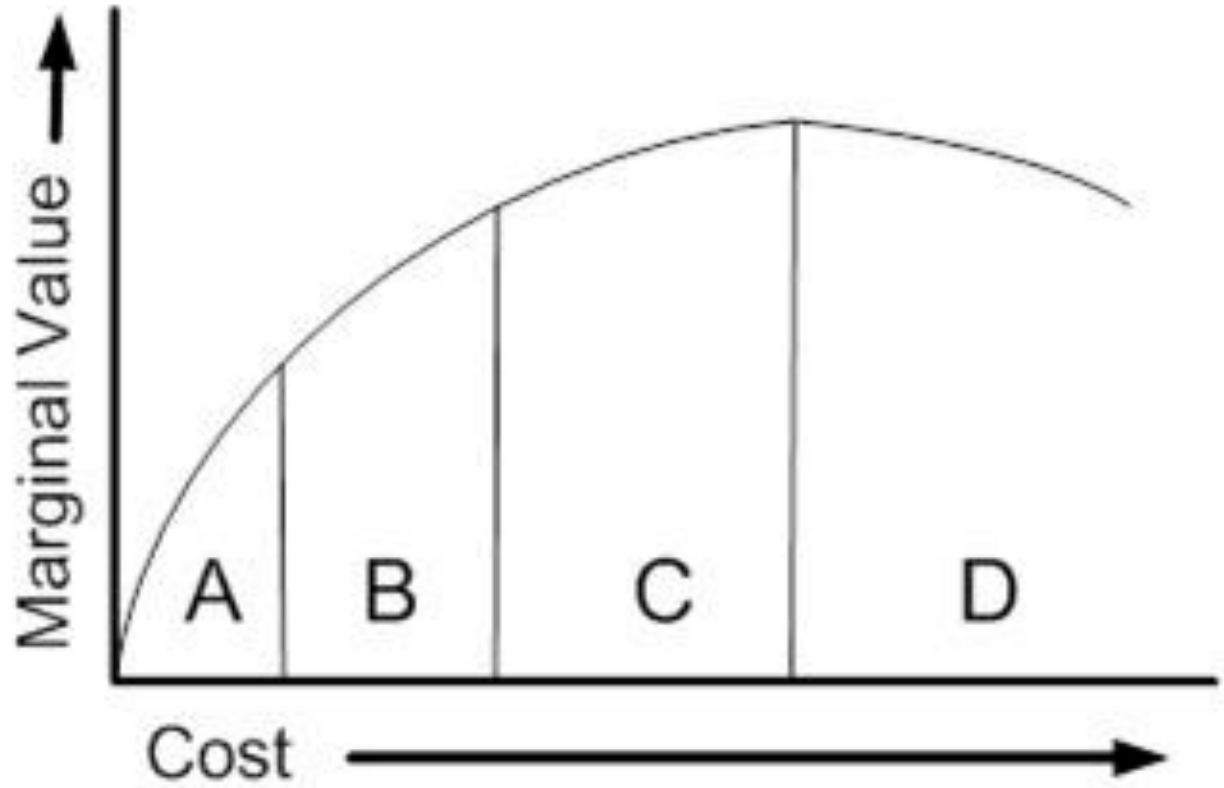
Objective comparison of systems ...

Criteria	Wired point type smoke detection	Wireless point type smoke detection	CCTV based point smoke detection
Performance (Score from 10)	8	7	7
	<i>Multiply by</i>	<i>Multiply by</i>	<i>Multiply by</i>
Logistics (Score from 7)	2	5	4
	<i>Multiply by</i>	<i>Multiply by</i>	<i>Multiply by</i>
Economics (Score from 6)	4	5	4
Total Score	64	175	112

Replace the types of detection with types of fire suppression.

*And of course ... we need to
avoid **over-engineering** the
strategy.*

How can water mist
optimise **value**?



*It's not just about meeting codes
and regulations. It is about
thinking strategically.*

Thank You
Dankjewel